



# **Section B:1**

## ***Waste Management***

### **PROJECT MANAGERS**

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## **SUMMARY**

Waste Management consists of the Solid Waste Storage and Disposal, Project Baseline Summary (PBS) WM03, Work Breakdown Structure (WBS) 1.2.1; Solid Waste Treatment, PBS WM04, WBS 1.2.2; Liquid Effluents - 200 Area, PBS WM05, WBS 1.2.3.1; and the Waste Encapsulation and Storage Facility, PBS TP02, WBS 1.4.2.

PBS WM05 is divided between WBS 1.2.3.1, Liquid Effluents (200 LEF) and WBS 1.2.3.2, 310 TEDF/340 Facility (300 LEF). The 310 TEDF/340 Facility work scope is included in the River Corridor Project, whereas the Liquid Effluents (200 LEF) work scope remains in Waste Management. For the purpose of performance analysis, PBS WM05 is reported in its entirety in the Waste Management Project (WMP), which has the majority of the work scope and funding.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of November 30, 2000. Other data is updated as noted.

## **ACCOMPLISHMENTS**

A collaborative effort with FH, DOE and the Regulators is ongoing to restructure the Waste Management Strategic Plan using new waste stream-oriented logic. The plan includes interfaces with other Site projects and incorporates the Hanford Vision 2012. The Plan identifies external drivers, technology insertion points, key strategies, key decisions and dates, and key customer interfaces. Similar efforts have been initiated for other FH Projects.

The fifth shipment of transuranic (TRU) waste to the Waste Isolation Pilot Plant (WIPP) was completed on November 30, 2000. The shipment contained 42 drums of TRU debris waste from the Central Waste Complex (CWC) inventory originally generated at the Plutonium Finishing Plant (PFP) Facility. No cask alignment issues were encountered during the loading operation. As requested by DOE, the next shipment will be scheduled for early spring. This will avoid shipment during poor weather conditions and allow campaigning of shipments from Hanford (i.e., two or more shipments in succession).

The first shipment of mixed low-level waste (MLLW) for thermal treatment to Allied Technology Group (ATG) was completed in November 2000. Through December 21, 2000, 16.6 cubic meters (m<sup>3</sup>) of waste had been shipped.

Six million gallons of wastewater were processed through the Effluent Treatment Facility (ETF) FYTD through November 30, 2000. From October 1, 2000, through December 19, 2000, 7.8 million gallons of wastewater were processed supporting the Environmental Restoration Contract 200-UP-1 Groundwater project.

Processing completed at the Waste Receiving and Packaging Plant (WRAP) —

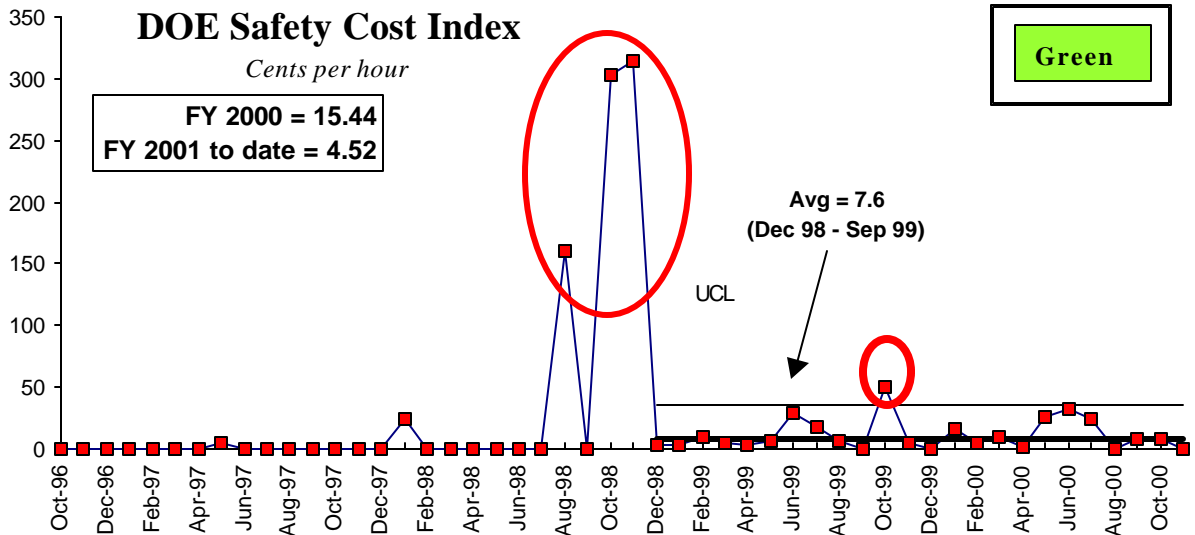
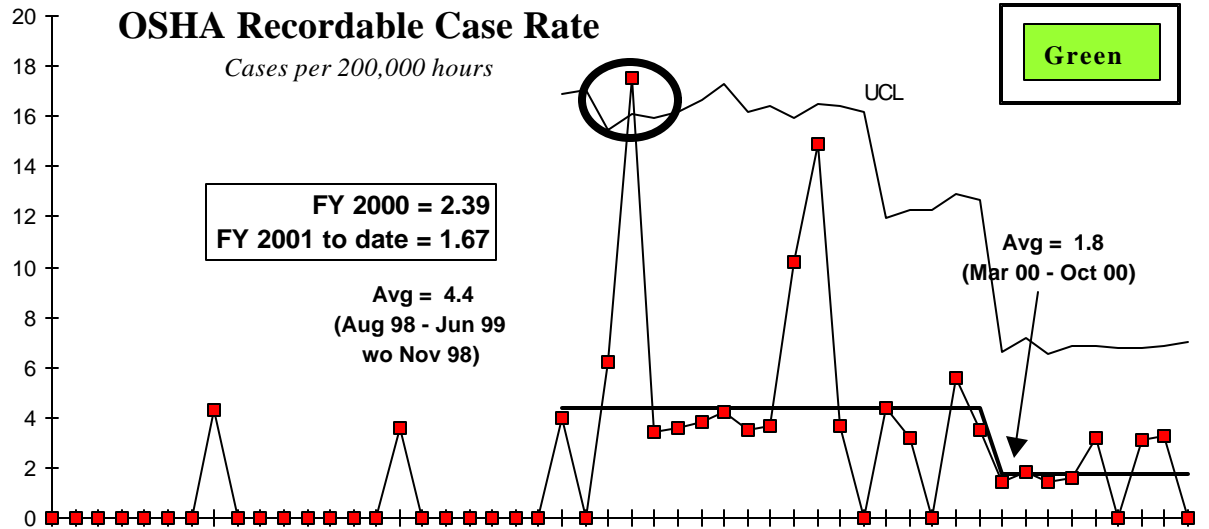
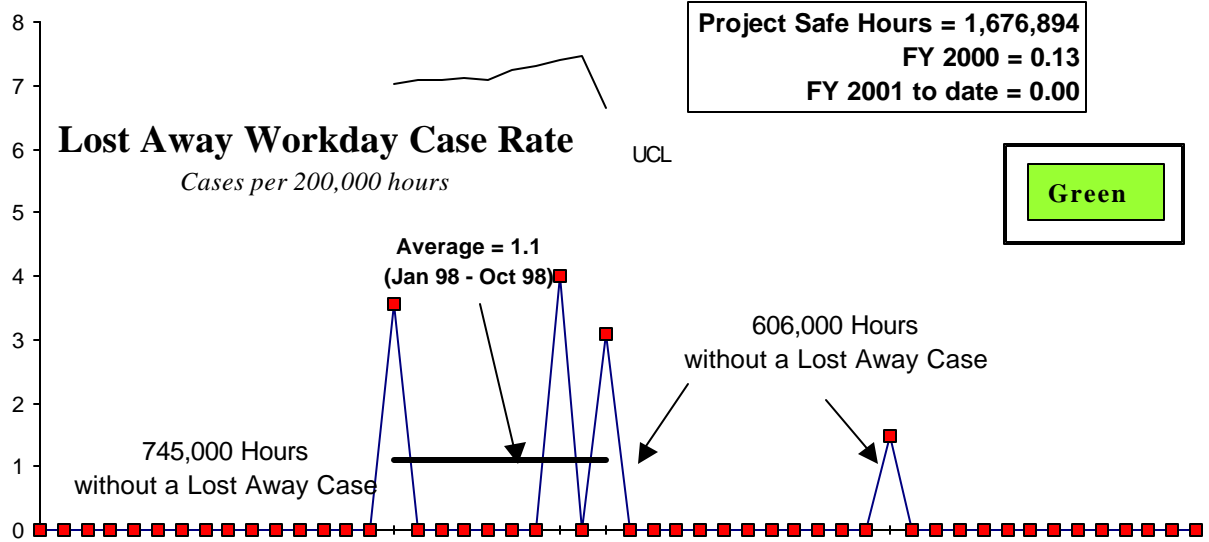
	Thru 11/30/00	Thru 12/13/00
Nondestructive Examination (NDE) on Drums	260	328
NDE on Boxes	2	2
Nondestructive Analysis (NDA) on Drums	165	218
TRU Glovebox (GB) Visual Exam - Drums	0	0
TRU GB Repackaged Drums	1	6
Low Level Waste (LLW) Glovebox Drums	0	0

## **SAFETY**

The Waste Management Project (WMP) had accumulated 1.6 million safe work hours as of the end of November. The reduction WMP achieved in its OSHA Recordable Case Rate is holding, and this indicator is stable at the revised baseline of 1.8 cases per 200,000 hours. A new baseline was established for the OSHA Recordable Case Rate at 1.8 cases per 200,000 hours, due to recent significant reductions in the case rate.

During the month of November, the WMP experienced no Restricted Workday Cases, six first aid cases, two "report only" (no symptoms) case and one "not job related" case. The Lost/Restricted workday case rate has been below average seven months in a row.

**PHMC Environmental Management Performance Report – January 2001**  
**Section B: 1 – Waste Management**

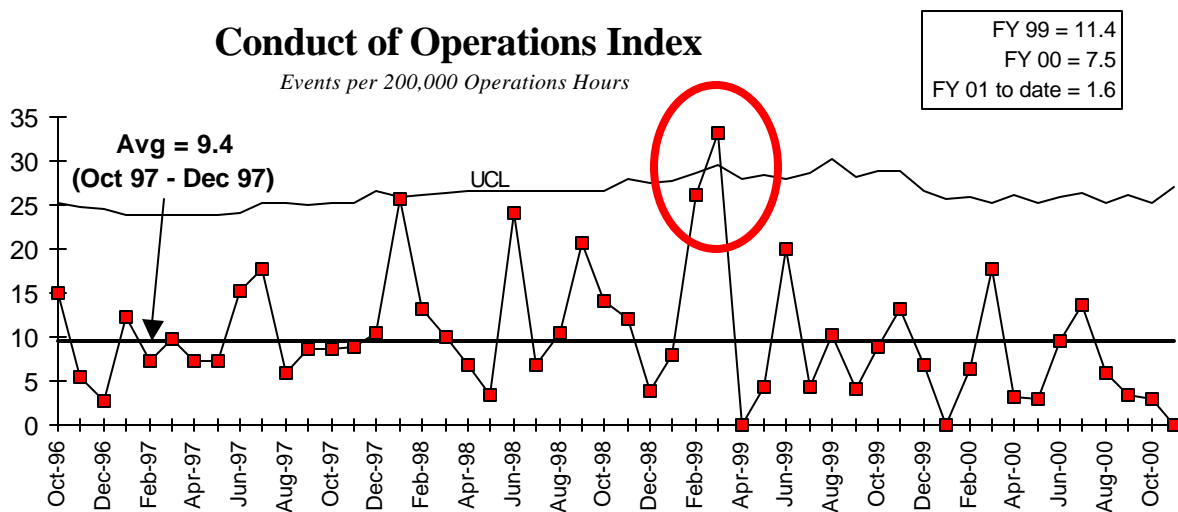


## CONDUCT OF OPERATIONS / ISMS STATUS

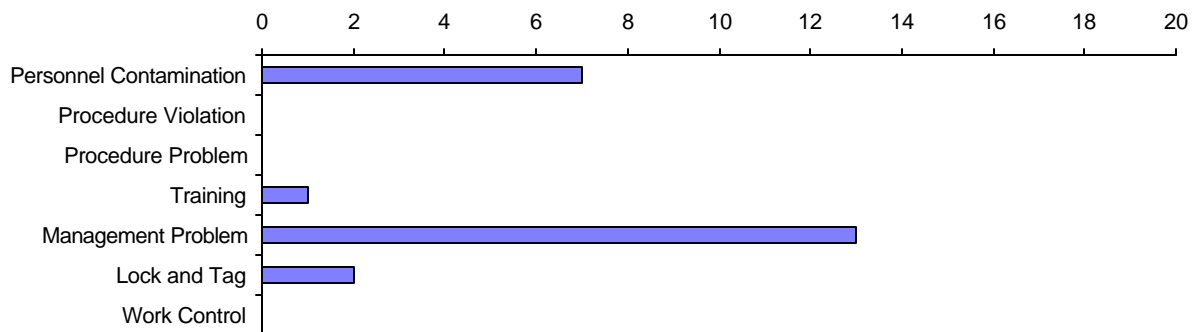
**Green**

### Conduct of Operations Index

*Events per 200,000 Operations Hours*



### Number of Reports Past 12 Months



## ISMS STATUS

**Green**

### Completed Activity:

The National Integrated Environmental, Safety and Health Management System (ISMS) Conference in December was a resounding success. Attendance was well over the expected level, and included representatives from RL, DOE-HQ, and DOE prime contractors from across the complex.

### Planned Actions:

Configuration Control of the Waste Management Project (WMP) portion of the ISMS Description document will be detailed and distributed as part of the Project level “sustain and maintain” efforts. The WMP will implement its Sustain and Maintain Plan for ISMS when approved.

The proposed plans for the upcoming Facility Evaluation Board (FEB) reviews within WMP will be evaluated for probable areas of concern and continuous process improvement.

HNF-PRO-2701, "Authorization Agreements/Authorization Envelopes," has an ISMS Phase II action to be revised by December 30, 2000. A WMP-led team has prepared a draft (which is a total revision of the procedure) to be reviewed by both RL and DOE-HQ representatives. The procedure is on track to be issued as scheduled.

## **BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT**

### **Breakthroughs**

Nothing to report at this time.

### **Opportunities for Improvement**

**Green**

**Mixed Waste Focus Area** — Waste Management continues to work with the Mixed Waste Focus Area (Robotics Product Line) on a technology development/demonstration activity at Hanford. The details of a demonstration/deployment of size-reduction technologies are being worked out. Initial plans are for a demonstration of size reduction at T Plant during FY 2001, using commercial technologies to size-reduce the PUREX Towers' TRU currently stored on the canyon deck. This activity supports development of technologies for later application in the M-91 Facility, and also supports clearing the deck for sludge receipt. The Mixed Waste Focus Area will provide funding for the activity.

A *Commerce Business Daily* (CBD) Request for Information notice ("Demonstration of Innovative and Improved Technologies for Size Reduction and Remote Material Handling") was published on November 28, 2000. Pacific Northwest National Laboratory (PNNL), the lead laboratory for this effort, received numerous contacts from potential vendors indicating interest in this procurement effort. Approximately fifteen vendors visited the Site on December 13, 2000, and were given details of the demonstration scope and a tour of T Plant, where the demonstration is planned.

## **UPCOMING ACTIVITIES**

**Remote-Handled TRU Project Management Plan (PMP)** — Support RL in its meetings with the Washington State Department of Ecology (Ecology) addressing Ecology's disapproval of the PMP.

### **Accelerate Readiness at T Plant to Receive and Store SNF K Basin Sludge —**

- Complete entire deck clearing in FY 2001.
- Complete safety basis documentation and long lead procurements in FY 2001.
- Install handling, drying and loading equipment in FY 2001.
- Complete procedures, training, and Operations Readiness Review (ORR) by June 2001 complete Shippingport (PA) fuel movement out of T Plant in FY 2002.

**Land Disposal Restriction (LDR) Report** — The legal appeal over the Final Determination continues. Mediation meetings are being held, as well as sub-group meetings at the working level, to attempt to define acceptable format and data content. Support will be provided as necessary to these activities. PNNL is assisting in the preparation of the 2001 LDR report. Preparation efforts have been initiated, but are time compressed given the ongoing changes resulting from the mediation activities.

### **FY TO DATE COST PERFORMANCE (\$M):**

	<b>BCWP</b>	<b>ACWP</b>	<b>VARIANCE</b>
<b>Waste Management</b>	\$14.3	\$12.6	\$1.6*

\*Rounding

The \$1.6 million (11 percent) favorable cost variance is primarily in RL-WM03 Solid Waste Storage and Disposal. Further information at the PBS level can be found in the following Cost Variance Analysis.

### **FY TO DATE SCHEDULE PERFORMANCE (\$M):**

	<b>BCWP</b>	<b>BCWS</b>	<b>VARIANCE</b>
<b>Waste Management</b>	\$14.3	\$14.3	\$0.0

There is no schedule variance. Further information at the PBS level can be found in the following Schedule Variance Analysis.

### **FY 2001 COST/SCHEDULE PERFORMANCE – ALL FUND TYPES** **CUMULATIVE TO DATE STATUS – (\$000)**

**Green**

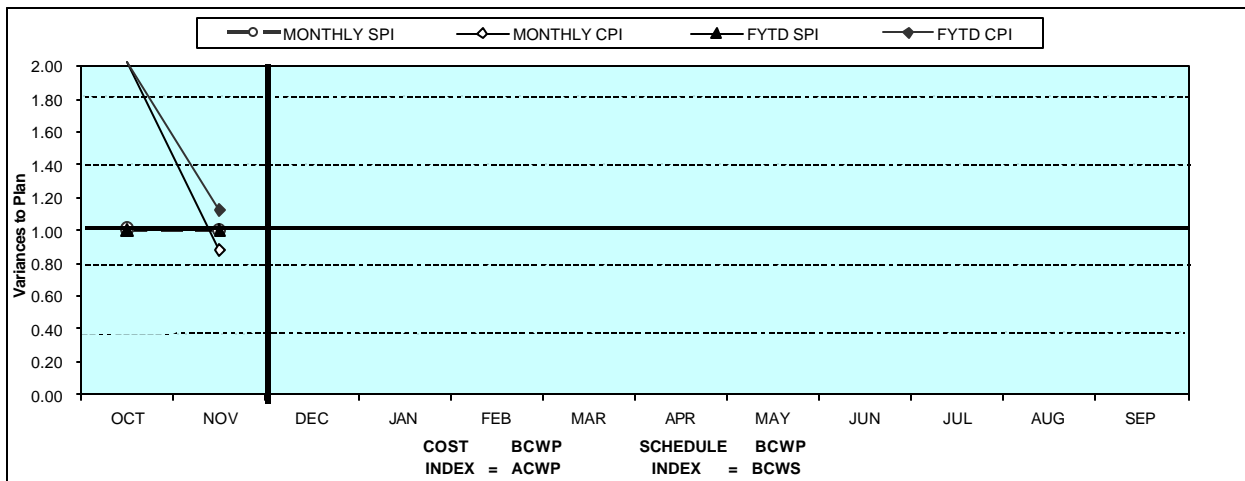
		<b>FYTD</b>							
<b>By PBS</b>		<b>BCWS</b>	<b>BCWP</b>	<b>ACWP</b>	<b>SV</b>	<b>%</b>	<b>CV</b>	<b>%</b>	<b>PEM</b>
PBS WM03 WBS 1.2.1	Solid Waste Storage & Disposal	\$ 3,734	\$ 3,726	\$ 3,126	\$ (8)	0%	\$ 600	16%	\$25,278
PBS WM04 WBS 1.2.2	Solid Waste Treatment	\$ 4,882	\$ 4,933	\$ 4,541	\$ 51	1%	\$ 392	8%	\$36,168
PBS WM05* WBS 1.2.3	Liquid Effluents - 200/300 Area	\$ 4,066	\$ 4,029	\$ 3,393	\$ (37)	-1%	\$ 636	16%	\$27,249
PBS TP02 WBS 1.4.2	WESF	\$ 1,589	\$ 1,568	\$ 1,587	\$ (22)	-1%	\$ (19)	-1%	\$10,721
<b>Total</b>		\$ 14,272	\$ 14,256	\$ 12,647	\$ (16)	0%	\$1,609	11%	\$ 99,416

PBS WM05 includes the 300 Area Liquid Effluent, which is part of the River Corridor Project.

RL-Directed costs (steam and laundry) are included in the Project Execution Module (PEM) BCWS.

## COST/SCHEDULE PERFORMANCE INDICES (MONTHLY AND FYTD)

Green



FY 2001	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	1.00	1.00										
MONTHLY CPI	2.03	0.89										
FYTD SPI	1.00	1.00										
FYTD CPI	2.03	1.13										
MONTHLY BCWS	\$ 5,413	\$ 8,859	\$ 7,667	\$ 9,062	\$ 7,441	\$ 7,915	\$ 8,089	\$ 10,685	\$ 7,558	\$ 7,536	\$ 9,780	\$ 9,411
MONTHLY BCWP	\$ 5,426	\$ 8,829										
MONTHLY ACWP	\$ 2,671	\$ 9,976										
FYTD BCWS	\$ 5,413	\$ 14,272	\$ 21,940	\$ 31,001	\$ 38,443	\$ 46,357	\$ 54,447	\$ 65,131	\$ 72,689	\$ 80,225	\$ 90,005	\$ 99,416
FYTD BCWP	\$ 5,426	\$ 14,256										
FYTD ACWP	\$ 2,671	\$ 12,647										

October FYTD Cost Performance Indices (CPI) in the above chart reflects anomalies associated with FY 2001 start-up.

## COST VARIANCE ANALYSIS: (+\$1.6M)

### WBS/PBS

### Title

#### 1.2.1/WM03

#### Solid Waste Storage & Disposal

**Description/Cause:** The favorable cost variance of \$0.6M (16 percent) was primarily due to vacancies, which are caused by delays in hiring and issuance of contracts per Senior Management.

**Impact:** No impact.

**Corrective Action:** Labor underruns will be used for the Requirements Initiatives Integration Team (RIIT) reductions.

#### 1.2.2/WM04

#### Solid Waste Treatment

**Description/Cause:** The favorable cost variance of \$0.4M (8 percent) was primarily due to delays in hiring, a fee accrual lower than budget, and staff supporting the Spent Nuclear Fuel (SNF) Operations Readiness Review (ORR).

**Impact:** No impact.

**Corrective Action:** No corrective action required.



**1.2.3.1/WM05**

**Liquid Effluents**

**Description/Cause:** The favorable cost variance of \$0.6M (16 percent) was primarily due to staff vacancies and delays in issuing contracts.

**Impact:** No impact.

**Corrective Action:** The labor underruns will be used for the RIIT Team reductions. Contract costs will start coming in December and January.

**1.4.2/TP02**

**WESF**

**Description/Cause:** The unfavorable cost variance of \$0.02M (1 percent) was within the established threshold.

**Impact:** No impact.

**Corrective Action:** No corrective action required.

**SCHEDULE VARIANCE ANALYSIS: (\$0.0M)**

**WBS/PBS**

**Title**

**1.2.1/ WM03**

**Solid Waste Storage & Disposal**

**Description /Cause:** The unfavorable schedule variance of \$0.01M (0.2 percent) was within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.

**1.2.2/ WM04**

**Solid Waste Treatment**

**Description /Cause:** The favorable schedule variance of \$0.1M (1 percent) was within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.

**1.2.3.1/ WM05**

**Liquid Effluents**

**Description /Cause:** The unfavorable schedule variance of \$0.04M (1 percent) was within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.

**1.4.2/ TP02**

**WESF**

**Description /Cause:** The unfavorable schedule variance of \$0.02M (1 percent) was within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.

## ISSUES

### Technical Issues

None.

### DOE/Regulator/External Issues

**Report for Hanford Land Disposal Restrictions (LDR) for Mixed Wastes** — Mediation efforts on LDR issues are in progress, with settlement of the legal issues possible. Preparation of the 2001 LDR report, in accordance with the expected settlement, is underway. The 2001 LDR report is due to the regulators by April 30, 2001, in accordance with Tri-Party Agreement milestone M-26-01, “Annual Hanford Land Disposal Restrictions Report.” The mediation/ negotiation process is causing a late start on preparing the report. (Report content is still being defined.) It may not be possible to meet the April 30 due date. A “110 day notification” under the Tri-Party Agreement process is being prepared to inform the regulators of this possibility. This notification preserves some rights and limits enforcement. A change request to move the April milestone date will be provided if and when it becomes necessary.

**Hanford Facility RCRA Permit** — Ongoing permit modifications include the corrective action transfer from the Hazardous and Solid Waste Amendments (HSWA) portion to the Dangerous Waste (DW) portion of the permit, updating the HSWA portion of the permit, Modification E of the DW portion, and Modification F of the DW portion.

The corrective action portion was appealed by DOE-HQ. Subsequently, Ecology and DOE-HQ settled on the appeal. The corrective action permit conditions will be placed out again for public comment. The HSWA portion update is expected to be finalized once the corrective portion becomes effective.

Modification E is expected to be issued in January 2001. DOE-HQ expects to appeal Modification E due to the excessive detail imposed by the draft permit conditions.

Modification F is being delayed until completion of Modification E. Modification E will incorporate the Central Waste Complex and the 616 Non-radioactive Dangerous Waste Storage Facility (NRDWSF) Closure Plan into the RCRA Permit.

**Remote-Handled TRU Project Management Plan (PMP)** — Ecology disapproved the PMP (Tri-Party Agreement milestone M-91-03) on August 14, 2000, due to the submittal not meeting the requirements set forth in Section 11.5 of the Tri-Party Agreement. Internal meetings with RL have been ongoing, and meetings with Ecology occurred in mid-September. A path-forward for resolution of Ecology’s concerns with the PMP is being developed based on these discussions.

**PHMC Environmental Management Performance Report – January 2001**  
**Section B: 1 – Waste Management**

**Burial Ground Draft Part A** — A Notice of Deficiency (NOD) was received on the Low Level Burial Grounds Draft Part A that was submitted as part of the Part B Working Draft Permit Application.

Of significance is that Ecology is requiring that the permit boundaries remain the same as those submitted in the original Part A submitted in 1985. If this comment were accepted, some burial grounds currently managed by Bechtel Hanford, Inc., as well as some low-level-only burial grounds, would be included in the permit. A WMP response is due within 60 days.

**Impacts of Waste Management PEIS and ROD** — The Waste Management Programmatic Environmental Impact Statement (PEIS) was issued on February 25, 2000. The Record of Decision (ROD) for low-level waste and mixed low-level waste will affect Hanford's disposal role for the Complex and may have significant impact on disposal volumes and rates at Hanford. DOE-HQ and Ecology negotiations continue; impacts depend upon the results of these negotiations.

## BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY00 COST IMPACT \$000	S C H	T E C H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
WM-2000-015	7/26/00	WMP FY 2001 MYWP Revision	\$0			8/31/00	9/25/00		At DOE-RL
FH-2001-001	9/12/00	Base Ops Reduction for PHMC Projects	(\$5,036)		X				At DOE-RL
FH-2001-002	9/25/00	FY2001 Fee Reduction to 90%	(\$740)						At DOE-RL
FH-2001-003	9/25/00	FY2001 Addition of High Priority Workslope	\$5,639		X				At DOE-RL
WM-2000-001	10/12/00	FY01 Base Ops reductions	(\$863)			12/19/00			At CCB
WM-2000-002	11/6/00	FY00 Carryover	\$3,471	X	X				Draft
WM-2000-003	11/29/00	242A Backflow preventer	\$18						Apprvd by E. Aromi 11/30
FSP-2001-016	12/6/00	FY01 WESF Base Ops reductions	(\$50)						Apprvd by E. Aromi 12/11
FSP-2001-017	12/7/00	FY00 WESF Carryover	\$780	X		12/19/00			
<b>ADVANCE WORK AUTHORIZATIONS</b>									
WM-AWA001 Rev. 1	12/7/00	FY 2001 LDR scope	\$1,000		X	12/7/00	12/7/00	12/7/00	

## MILESTONE ACHIEVEMENT

Green

MILESTONE TYPE	FISCAL YEAR-TO-DATE				REMAINING SCHEDULED			TOTAL FY 2001
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	0	0	0	0	0	3	0	3
DOE-HQ	0	0	0	0	0	0	0	0
RL	0	0	0	0	0	1	0	1
Total Project	0	0	0	0	0	4	0	4

Only TPA/EA milestones and all FY2001 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY2001 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY 2002 TPA/EA milestones.

### FY 2001 Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
<b>M-91-11-T01 (A2G-01-103)</b>	Submit LLWM Facility ES/FDC to Ecology	<b>Due 12/31/00</b> – Change request due to delete milestone
<b>M-91-12 (A2G-01-104)</b>	Initiate Thermal Treatment of CH-LLMW	<b>Due 12/31/00</b> – Thermal treatment of Hanford waste is planned to begin on December 26, 2000. Since demonstration of sustained thermal treatment will not be realized by the end of December, credit for completion of the M-91-12 milestone will not be taken. The forecast for M-91-12 completion is currently in February 2001.
<b>M-91-13 (A1C-01-001)</b>	Initiate Disposal of CH-LLWM	<b>Due 06/30/01</b> – Completed 9/15/1999
<b>M-91-18 (WMP-01-001)</b>	Transmit T-Plant Sludge Storage Conceptual Design to Ecology	<b>Due 06/29/01</b> – On Schedule
<b>M-26-05H (WMH-00-006)</b>	Prep Biennial Tritium Treatment Technology Evaluation report	<b>Due 08/31/01</b> – On Schedule

### DNFSB Commitments

	Nothing to report at this time.	
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## MILESTONE EXCEPTION REPORT

<u>Number/WBS</u>	<u>Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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**OVERDUE – 0**

**FORECAST LATE – 0**

**FY 1999 OVERDUE – 1**

<b>TRP-98-709</b>	<b>RL</b>	Complete Hot Cell Deactivation	03/31/99	03/30/01
<b>1.4.2</b>		WESF Facility (A-E)		

**Cause:** This milestone is not complete due to not being supported at the current funding level.

**Impact:** No overall impact is expected.

**Corrective Action:** Return-on-Investment (ROI) funding has been identified for this work scope and a new forecasted completion date of March 30, 2001 established.

### FY 2002 Tri-Party Agreement / EA Milestones

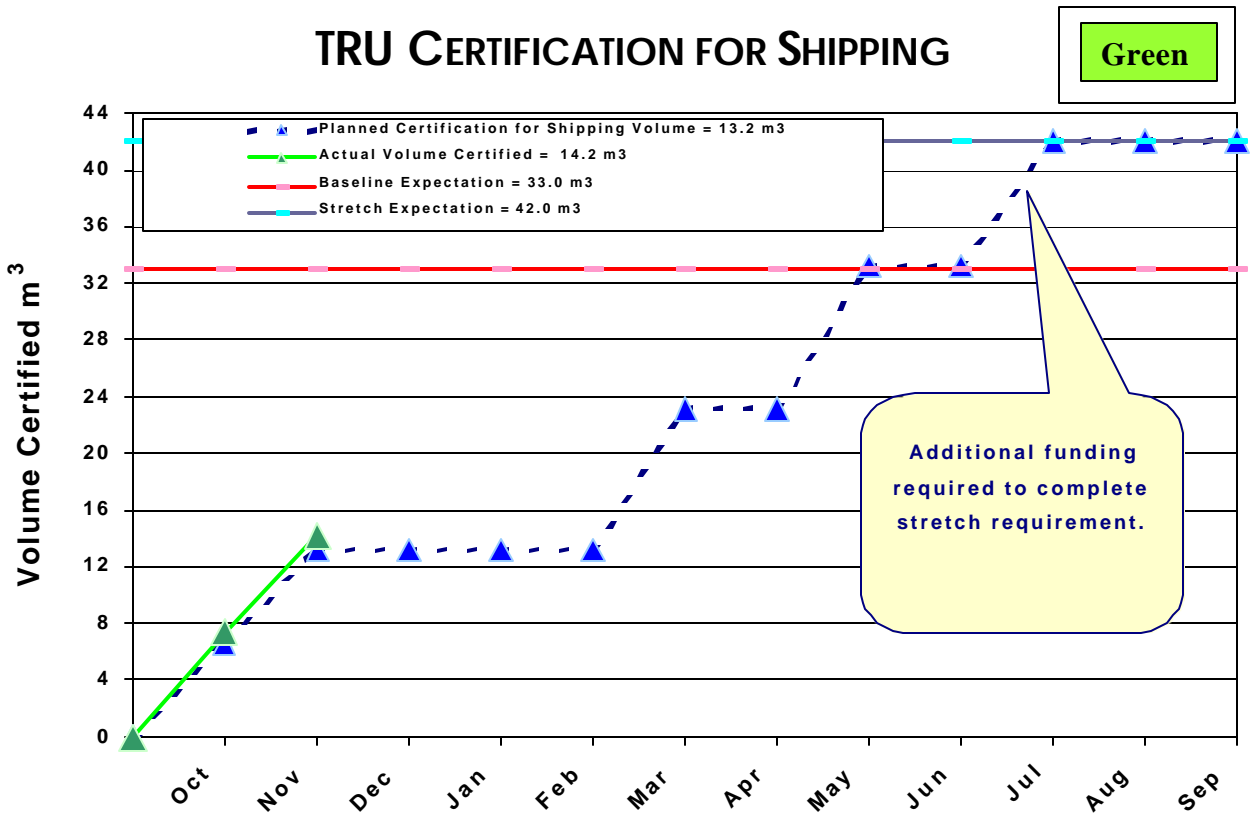
Number	Milestone Title	Status
	Nothing to report at this time.	

### DNFSB Commitments

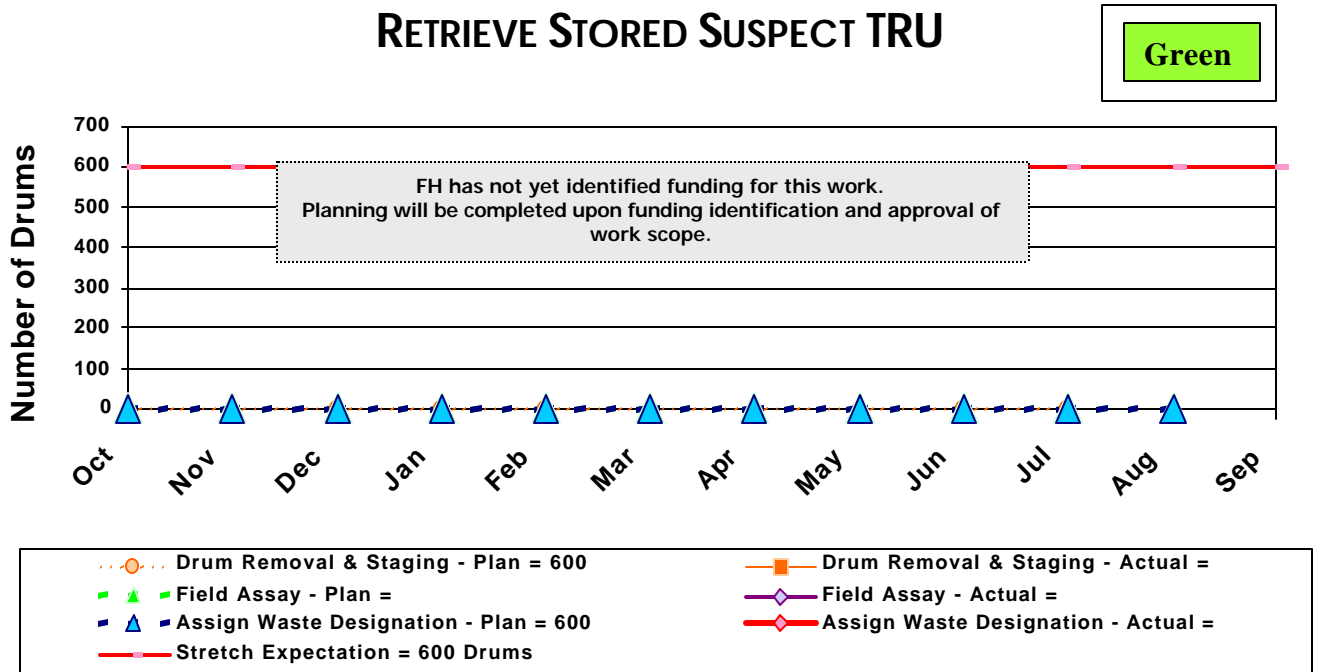
	Nothing to report at this time.	
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## PERFORMANCE OBJECTIVES

*NOTE: Recently finalized Performance-Based Incentives (PBIs) have not been incorporated into the information below. New PBIs, as well as other changes associated with the Fluor contract extension, will be reflected next reporting period.*



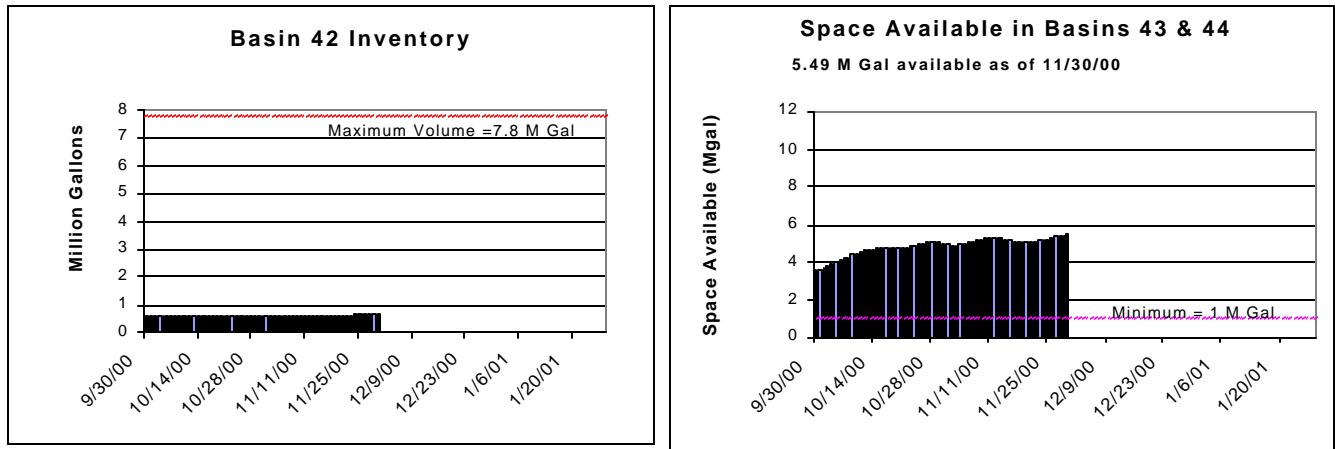
**Action Plans:** On track and currently ahead of schedule. Through November 2000, 14.2 m<sup>3</sup> TRU waste certified for shipping.



**Action Plans:** Working to identify funding and obtain approval of work scope.

## LIQUID WASTE PROCESSING

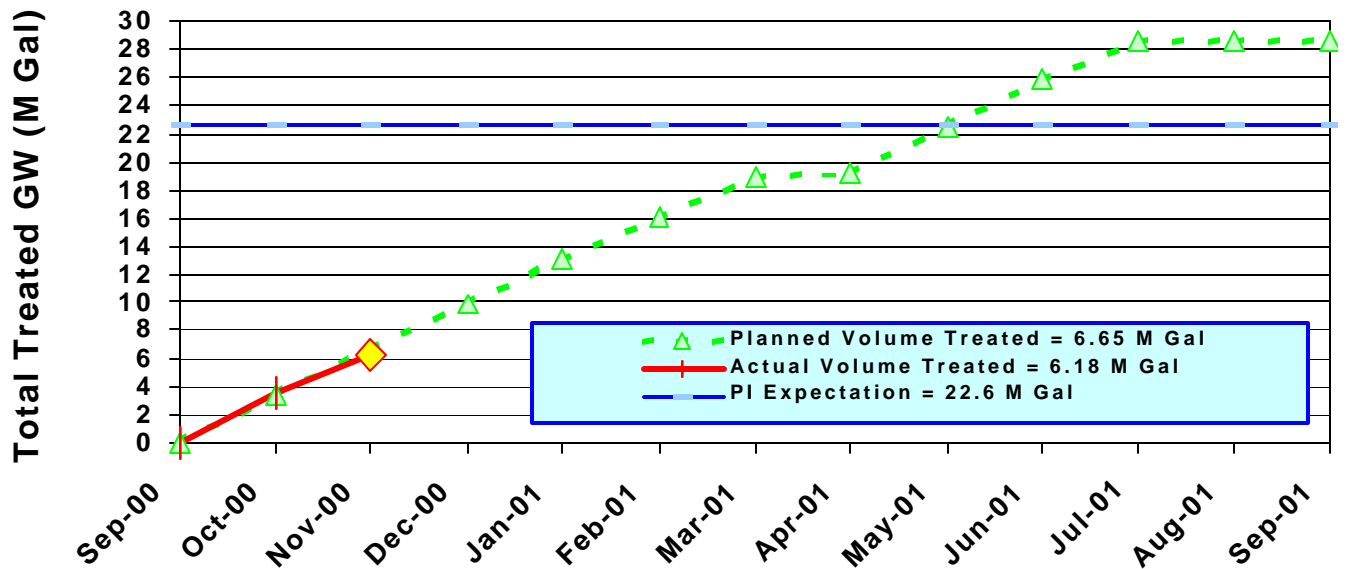
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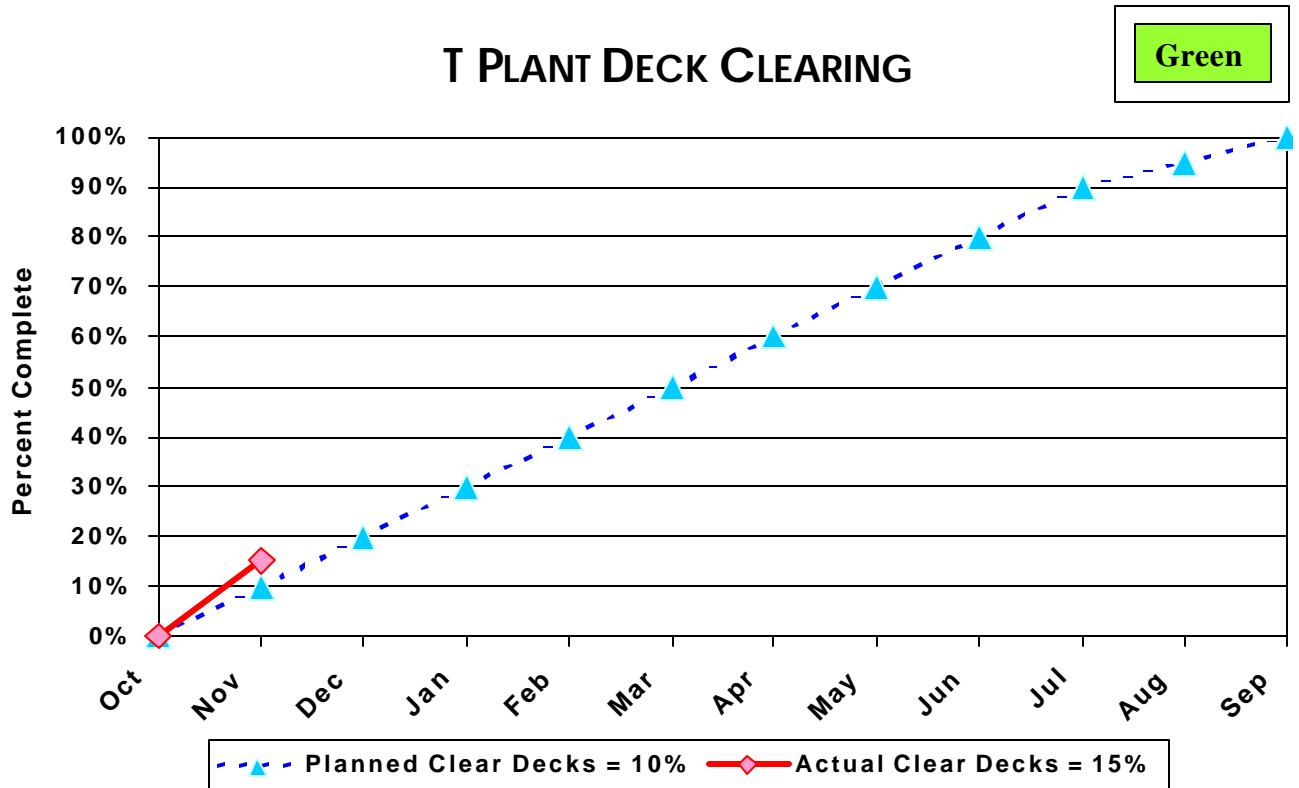
**Action Plans:** On track. Basin #42 maintained at less than 7.8 M gallons. At end of November, 5.5 M gallons of space available in LERF Basins #43 and #44 (required to be maintained at less than 7.8 M gallons with at least a 1 M gallon reserve).

## UP-1 GROUNDWATER TREATMENT

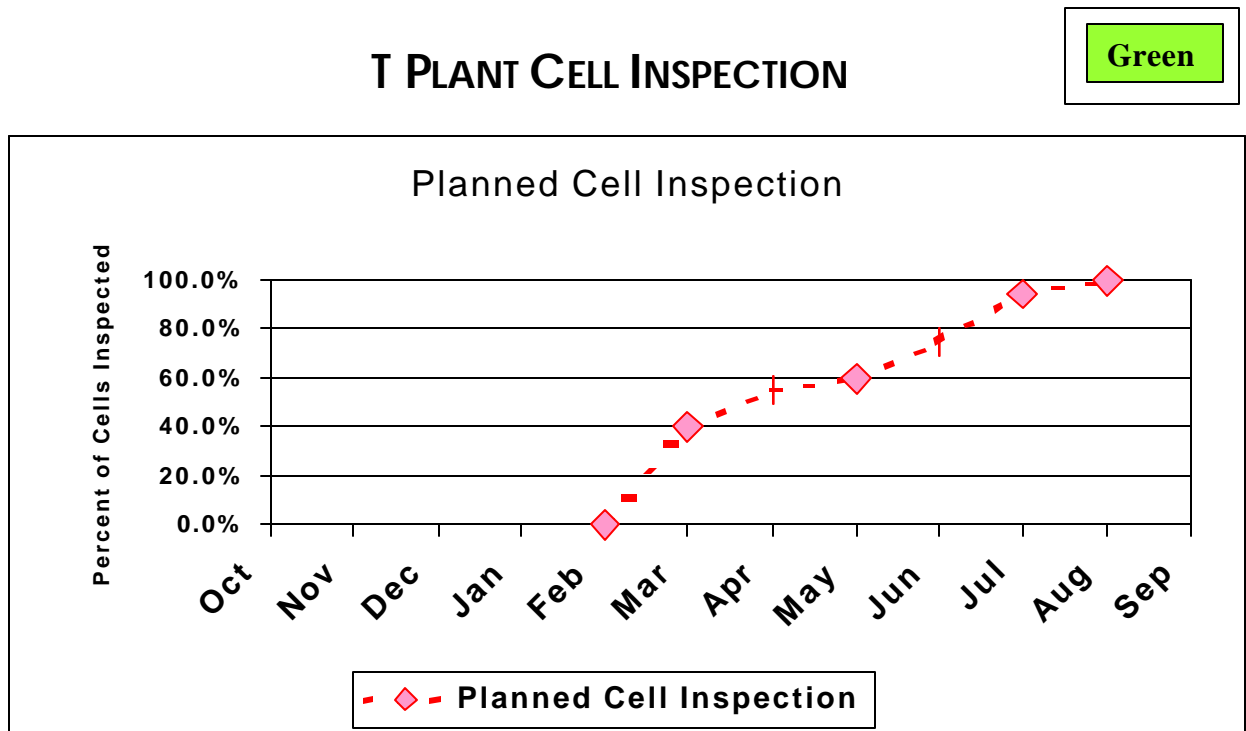
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**Action Plans:** On track. Through November processed 6.2 M gallons.

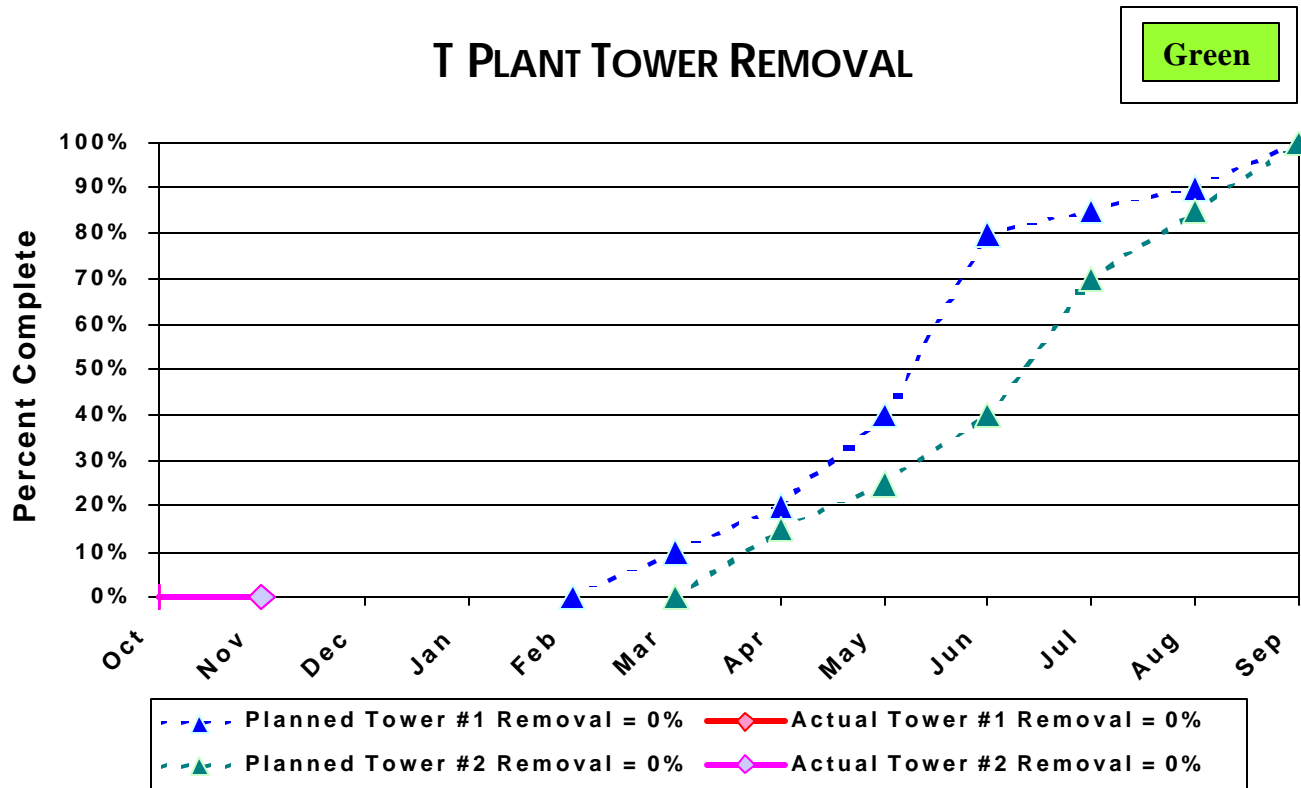


**Action Plans:** On track.



**Action Plans:** On track. Cell inspection tied to deck clearing.





**Action Plans:** On track.

## KEY INTEGRATION ACTIVITIES

- Preparing T Plant to receive Spent Nuclear Fuel K Basin sludge.
- Issuance of the Records of Decision (ROD) for Low-Level Waste (LLW) and Mixed Low-Level Waste (MLLW) is expected to affect Hanford's role in disposing of waste from other sites. Working with RL, DOE-HQ, Ecology, and other Sites to develop and define Hanford's role as one of the identified LLW/MLLW disposal sites for the DOE Complex.
- Continue support of UP-1 Groundwater treatment.
- Continue support to River Corridor Project in cleanup and removal of waste from 324/327 buildings.

- Support was provided to the CH2M HILL Hanford Group (CHG) optimization study to evaluate the feasibility of treating the Submerged Bed Scrubber liquid waste from the Waste Treatment Plant (WTP) in the Effluent Treatment Facility (ETF). There is concern that the total quantity of Tc<sup>99</sup> in the liquid waste may be several thousand curies, and would find its way to the mixed waste trench via solid waste from ETF. Iodine-129 is also a problem. Better information is needed on the volume and composition of the liquid waste to determine the impact on the performance assessment.
- A meeting was held with CHG to begin further development of the strategy for disposing of failed melters from the WTP. Comments on the strategy document issued in October were reviewed to identify areas of uncertainty. Additional work is planned on permitting, transportation, and the cost estimate. Waste Management is leading this activity.
- Continue to work with PNNL, EM 50 and Mixed Waste Focus Areas to obtain funding in support of the M-91 Facility Project.
- Continue to work with DOE-RL, -Oakland, and -Ohio to support resolution of TRU small quantity site disposition issues.